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     (FILE 'HOME' ENTERED AT 13:53:22 ON 16 MAY 2003)

     FILE 'MEDLINE, BIOSIS, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS' ENTERED AT
     13:53:38 ON 16 MAY 2003
L1          3501 S APOPTO?(5A)MARKER#
L2           466 S L1/TI
L3           288 S L2 AND PY<2001
L4           156 DUP REM L3 (132 DUPLICATES REMOVED)
L5           256 S L2 AND (CANCER? OR TUMOR? OR TUMOUR? OR MALIGNAN? OR NEOPLAS
L6           247 S L2 AND (CANCER? OR TUMOR? OR TUMOUR? OR MALIGNAN? OR NEOPLAS
L7           145 S L2 AND (LEUKEMI## OR LEUKAEMI## OR LYMPHOMA# OR MELANOMA# OR
L8           256 S L6 OR L7
L9           144 S L8 AND PY<2001
L10           77 DUP REM L9 (67 DUPLICATES REMOVED)
L11         1476 S L1 AND (CANCER? OR TUMOR? OR TUMOUR? OR MALIGNAN? OR
NEOPLAS?
L12          824 S L1 AND (LEUKEMI## OR LEUKAEMI## OR LYMPHOMA# OR MELANOMA#
OR
L13          303 S L11 AND ANTIBOD?
L14          159 S L12 AND ANTIBOD?
L15          323 S L13 OR L14
L16          179 S L15 AND PY<2001
L17           69 DUP REM L16 (110 DUPLICATES REMOVED)
L18           59 S L17 NOT L10

     FILE 'MEDLINE' ENTERED AT 14:48:19 ON 16 MAY 2003
L19          105 S (2000 AND 77 AND 11)/SO
L20            1 S L19 AND MORSI?/AU

     FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 15:07:53 ON 16 MAY 2003
L21          546 S APOPTO?(3A)MARKER#
L22          127 S L21(S)ANTIBOD?
L23           91 S L22 AND ((FLOW(W)CYTOMET?) OR (FLUORESC?(2W)MICROSCOP?) OR (
L24           20 S L23 AND PD<20000112

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Concept Details

Genes, ras

Family of retrovirus-associated DNA sequences (ras) originally isolated from Harvey (H-ras, Ha-ras, rasH) and Kirsten (K-ras, Ki-ras, rasK) murine sarcoma viruses. Ras genes are widely conserved among animal species and sequences corresponding to both H-ras and K-ras genes have been detected in human, avian, murine, and non-vertebrate genomes. The closely related N-ras gene has been detected in human neuroblastoma and sarcoma cell lines. All genes of the family have a similar exon-intron structure and each encodes a p21 protein.

Related Concepts | View MeSH Information

Add to Search **using Connector:** AND or Cancel

- [ ] Main point of item
- [ ] Do not explode this term

With Subheadings: Subheading Definitions

- [ ] drug effects
- [ ] ethics
- [ ] genetics
- [ ] immunology
- [ ] physiology
- [ ] radiation effects

MeSH Tree 1

- All MeSH Categories
  - Biological Sciences (MeSH Category)
    - Genetic Structures
      - Genes
        - Oncogenes
          - Proto-Oncogenes
            - Genes, abl
            - Genes, bcl-1
            - Genes, bcl-2
            - Genes, erbA
            - Genes, erbB
            - Genes, fms
            - Genes, fos
            - Genes, jun
            - Genes, mos
            - Genes, myb
            - Genes, myc
            - **Genes, ras**
            - Genes, rel
            - Genes, sis
            - Genes, src

anti-p21 antibody (sc-397-G, Santa Cruz Biotechnology).

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L10: Entry 2 of 2 File: USPT Sep 28, 1999

US-PAT-NO: 5958892
DOCUMENT-IDENTIFIER: US 5958892 A
** See image for Certificate of Correction **

TITLE: 2-methoxyestradiol-induced apoptosis in cancer cells

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mukhopadhyay; Tapas	Houston	TX		
Roth; Jack A.	Houston	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Board of Regents, The University of Texas System	Austin	TX			02

APPL-NO: 08/ 688613 [PALM]
DATE FILED: July 30, 1996

INT-CL: [06] A61 K 48/00, C12 N 15/79, C12 N 5/10

US-CL-ISSUED: 514/44; 435/320.1, 435/6, 435/69.1, 435/172.3, 435/375, 530/350.7
US-CL-CURRENT: 514/44; 435/320.1, 435/375, 435/6, 435/69.1

FIELD-OF-SEARCH: 514/44, 514/2, 435/235.1, 435/320.1, 435/6, 435/69.1, 435/172.3, 435/375, 530/350.7, 530/399, 424/93.1

PRIOR-ART-DISCLOSED:

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
95/12660	May 1995	WO	
WO 95/28948	November 1995	WO	

OTHER PUBLICATIONS

Tishler et al., "Microtubule-Active Drugs Taxol, Vinblastine, and Nocodazole Increase the Levels of Transcriptionally Active p53," Cancer Res., 55:6021-6025, 1995.
D'Amato et al., "2-Methoxyestradiol an Endogenous Mammalian Metabolite, Inhibits Tubulin Polymerization by Interacting at the Colchicine Site," Proceed. Natl. Acad. Sci. USA, 91:3964-3968, Apr. 1994.
Fotsis et al., "The Endogenous Oestrogen Metabolite 2-Methoxyoestradiol Inhibits Angiogenesis and Suppresses Tumor Growth," Nature, 368:237-239, 1994.
Seegers et al., "The Cytotoxic Effects of Estradiol-17 Beta, Catecholestradiols and Methoxyestradiols on Dividing MCF-7 and HeLa Cells," J. Steroid Biochem., 32(6):797-809, 1989.
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Breast Carcinoma Cell Line, J. Steroid Biochem., 270(48):28507-28510, 1995.
Mukhopadhyay et al., Induction of Apoptosis in Human Lung Cancer Cells After Wild-Type p53 Activation by Methoxyestradiol, Oncogene, 14(3):379-384, 1997.
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Fotsis et al. [Nature.368:237-239 (Mar. 1994)].
Hurd et al. [J. of Biol. Chem. 270(48):28507-10 (Dec. 1995)].
Kadkol et al. [Clinical and Investigative Medicine. 18(4)supp p.A668 #3877(Aug. 1995)].

Lottering et al (C34), Oct. 1, 1997.

ART-UNIT: 162

PRIMARY-EXAMINER: Chambers; Jasemine C.

ASSISTANT-EXAMINER: Hauda; Karen M.

ATTY-AGENT-FIRM: Arnold, White & Durkee

ABSTRACT:

The present invention details methods for the treatment of cancer. In particular, it concerns the induction of apoptosis of cancer cells following treatment with methoxyestradiol. 2-methoxyestradiol (2-MeOE.sub.2) increase wild-type p53 levels in a human non-small lung cancer cell lines associated with accumulation of cyclin dependent kinase inhibitor p21 WAF1/CIP1. Significant apoptotic cell death occurred after the drug treatment. Thus, 2-MeOE.sub.2 facilitates induction of p53-mediated apoptosis.

26 Claims, 6 Drawing figures

Int J Hematol 1998 Jul;68(1):29-43

Related Articles, Links

Mechanisms involved in chemotherapy-induced apoptosis and their implications in cancer chemotherapy.

Kamesaki H.

Laboratory of Experimental Radiology, Aichi Cancer Center Research Institute, Nagoya, Japan.

The mechanisms by which chemotherapeutic agents kill neoplastic cells have been controversial. Recently, however, accumulated evidence has suggested that these agents exert their cytotoxic effects mainly by inducing apoptosis in tumor cells. This article reviews the findings of recent studies on the mechanisms by which chemotherapeutic agents induce apoptosis and their implications in cancer chemotherapy.

Anticancer Drugs 1995 Jun;6(3):443-50

Related Articles,

Links

Apoptosis in murine tumors treated with chemotherapy agents.

Meyn RE, Stephens LC, Hunter NR, Milas L.

Department of Experimental Radiotherapy, University of Texas MD Anderson Cancer Center, Houston 77030, USA.

There is increasing attention directed to the hypothesis that apoptosis plays a role in the response to cancer treatment including chemotherapy. However, the evidence to support this hypothesis has come almost entirely from experiments conducted in cultured cell systems. To extend this hypothesis to the therapeutic setting it is necessary to address this critical question in tumors treated in vivo. We have therefore evaluated the extent of apoptosis induced in murine tumors treated in vivo with cancer chemotherapy agents. Seven different murine tumors, comprising a mammary adenocarcinoma (MCa-4), an ovarian adenocarcinoma (OCa-1), a lymphoma (LY-TH), three sarcomas (FSA, NFSA and SA-NH) and a squamous cell carcinoma (SSC-7), were examined 8 and 24 h after treatment with cisplatin or cyclophosphamide (CY). Apoptosis was scored by morphometric analysis of histological sections of the tumors. The results showed that MCa-4, OCa-1 and LY-TH had a significant apoptotic response to both cisplatin and CY, and the other tumors had essentially no apoptotic response. In addition, two of these tumors, MCa-4 and OCa-1, underwent apoptosis in response to adriamycin, 5-fluorouracil, Ara-C, etoposide, camptothecin and fludarabine. These observations demonstrate that apoptosis may be a feature of tumor response to chemotherapy in vivo, and illustrate the heterogeneity of apoptotic response amongst different tumor types and to different cytotoxic agents.

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L1: Entry 1 of 1 File: USPT Aug 10, 1999

US-PAT-NO: 5935801
DOCUMENT-IDENTIFIER: US 5935801 A

TITLE: Monoclonal antibody that detects apoptotic antigen

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schlossman; Stuart Franklin	Newton Centre	MA		
Zhang; Chonghui	Brookline	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Dana-Farber Cancer Institute	Boston	MA			02

APPL-NO: 08/ 623876 [PALM]
DATE FILED: March 29, 1996

INT-CL: [06] G01 N 33/53

US-CL-ISSUED: 435/7.91; 435/7.9, 435/29, 435/332, 435/336, 435/346, 530/388.2, 530/388.7, 436/538
US-CL-CURRENT: 435/7.91; 435/29, 435/332, 435/336, 435/346, 435/7.9, 436/538, 530/388.2, 530/388.7

FIELD-OF-SEARCH: 530/388.2, 530/387.1, 530/388.7, 435/29, 435/7.9, 435/7.91, 435/240, 435/26, 435/240.27, 435/332, 435/336, 435/346, 436/538

PRIOR-ART-DISCLOSED:

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0510691A1	October 1992	EP	
0511202B1	June 1994	EP	
6109729	April 1994	JP	
9077794	March 1997	JP	
WO92/17193	October 1992	WO	
WO 00642	January 1995	WO	

OTHER PUBLICATIONS

Journal of Immunology, vol. 157, Nov. 1996, pp. 3980-3987, Zhang et al., "A mitochondrial membrane protein defined by a novel monoclonal antibody is preferentially detected in apoptotic cells.".
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Zamzami,N.,P. Marchetti, M.Castedo, C. Zanin,J.L. Vayssiere, P.X. Petit, and G. Kroemer. 1995. Reduction in mitochondrial potential constitutes an early irreversible stop of programmed lymphocyte death in vivo.J.Exp.Med. 181:1661-1672.
Zhang C.H.,M.J. Robertson, and S.F. Schlossman.1995. A triplet of nuclease proteins (NP.sup.42-50) is activated in human Jurkat cells undergoing apoptosis. Cell. Immunol. 165:161-167.

ART-UNIT: 164

PRIMARY-EXAMINER: Chan; Christina Y.

ASSISTANT-EXAMINER: Nolan; Patrick J.

ATTY-AGENT-FIRM: Alter; Mitchell E.

ABSTRACT:

A monoclonal antibody which specifically binds to an antigen on the membrane of mitochondria in apoptotic cells. The antigen is a 38 kD protein that is detectable in cells undergoing apoptosis and undetectable in normal cells. This selectivity of the monoclonal antibody provides a method of distinguishing between normal and apoptotic cells in a sample of human hemopoietic cell populations. A method for detecting and measuring cells undergoing apoptosis is also provided.

8 Claims, 18 Drawing figures

To identify the molecular markers for apoptotic cells, monoclonal antibodies were developed by immunizing mice with dying Jurkat cells. An antibody, designated anti-7A6, was found to react preferentially with cells undergoing apoptosis and not with normal cells. The antibody-defined molecule is a 38 kD protein localized to the membrane of mitochondria.